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ABSTRACT

This report proposes a career typology as a method to evaluate teacher education programs. To test the viability of this approach, University of Minnesota graduate students majoring in elementary education were studied in terms of their declared career orientations. This investigation indicates that the graduate program in elementary education was oriented to serve a single group of educators, namely, school personnel, and tended to be less receptive to other groups of educators utilizing the program to further their career development. It is concluded that this approach is viable in terms of the data generated and the distinctions possible. A 26-item bibliography is included. (Author)

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PROGRAM EVALUATION IN TEACHER EDUCATION

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# PROGRAM EVALUATION IN TEACHER EDUCATION

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If one were to choose three attributes to describe higher education in the United States, the concepts that one would want to convey would be those of magnitude, diversity, and change. Although these concepts may initially be associated with only undergraduate education, they are, in actual fact, even more reflective of graduate education. The growth in graduate education has been considerably more accelerated than that of the undergraduate college since the turn of the century (American Council on Education, 1971). With this increase in enrollment has come a proliferation of programs and/or program adaptations to meet the ever-expanding needs of a wider clientele (Arlt, 1969). A stranger to the graduate education scene might well be confounded by its complexity and diversity. In form and organizational structure each institution has adapted to its own way of meeting these demands. The net result is the existence of programs that, although they carry the same title, vary distinctively from institution to institution. A case in point is the Master of Arts degree program. Elder is quoted as having said of the degree that it is ". . . a bit like a street walker -- all things to all men . . ." (Berelson, 1961). Whatever the quality of the merchandise, ever-rising demands for the degree are easily documented (American Council on Education, 1971). The current popularity of the degree in the field of education is well known and currently accounts for approximately one-half of all master degrees awarded in the United States (American Council on Education, 1965). Recent critics of graduate education have suggested that as the degree is "everything to everybody," little if

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anything can be done to rehabilitate the degree (Snell, 1965). Even when one's motivations are not those of rehabilitation, but the more neutral ones of evaluation, the "everything to everybody" qualities of the degree defy easy handling.

It is to the enigmatic problem of evaluation as it relates to graduate educational programs that this article is addressed. In light of the ever-increasing demand for program evaluation by both the public (Phi Delta Kappan, 1967) and educators themselves (Phi Delta Kappan, 1970), the major problem facing persons attempting to evaluate educational programs is readily identified. Not only are program evaluators being called upon with increased frequency to document and thus justify the existence of programs, but they are being called upon to perform such documentation in what appears to be an ever-amorphous program structure. Without more adequate attempts at the documentation of exactly what it is that many of our existing programs are doing, little can be done either to improve these programs or to make them less vulnerable to attack by the public. Clearly what is needed as much as the evaluation itself is the simultaneous development of new approaches and techniques which have universal applicability, and yet, self-adapt to the endemic program structure under study.

In terms of a proposed design for such research, one of the first considerations that must be established is to what end is the evaluation performed. Evaluation qua evaluation seems at best naive; at worst it lacks both depth and subtlety. If, as Guba (1968) suggested, the purpose of evaluation is to provide information for decision making, then, in light of the earlier discussion regarding graduate education, a focus that attempts to get at the ever-mounting problem of determining what program for what participant is clearly an appropriate one.

Otto and Sanders (1964) suggested that curriculum in and of itself reflects an internal philosophical consistency between curricular parts.

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This proposition, however, ignores the fact that a curriculum can and must find purpose as it is reflected in the student (Curtin, 1964). It is, in short, a curriculum qua curriculum approach. A more viable orientation, therefore, would be one that not only attempts to study the interrelations between program parts, but further the internal consistency of the program as it relates back to the needs of the participants for which it was designed. Such an orientation is based on a philosophy of social utility. The assumption is made that who comes into a program reflects not only the program itself, but further adapts and changes the program so as to make it more congruent with his needs and goals. If this is true, a study of the student and his program is in fact a study of the curriculum.

A context that permits an examination of programs in this light was suggested by both Stanley (1966) and Darley (1962); namely, career development. Using career development as a context, it can be hypothesized that persons utilizing a given program for differing career development reasons will differ on certain dimensions throughout the program of study. Stake (1967) proposed that this difference would be observable throughout the program: at entrance, in execution, and at graduation. Stake referred to these broad categories as antecedent, transactions, and outcomes.

One might ask at this point, however, "What are the appropriate dimensions along which one can study persons within the profession of education?" A review of the literature offers little if any assistance in finding an answer to this question. Most of the work in the area of career development has focused on a study of the factors involved in an initial career decision (Super, 1957; Tiederman, 1963). Modest understandings for professional career development were offered, however, by the National Commission on Teacher Education (NCTE) of the National

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Education Association (NEA, 1961), Anderson (1962), and Lieberman (1956, 1960). These three sources each suggest a dimension along which, they feel, distinctions ought to be made among groups of educators.

NCTE suggested that the total set of all educators could be divided into five areas. These they identified as:

1. Elementary Education Personnel (classroom and special program teachers, supervisors, administrators, and the like);
2. Secondary Education Personnel (classroom teachers, supervisors, administrators, and the like);
3. Higher Education Personnel (classroom teachers, supervisors, administrators, and the like);
4. Government Agency Personnel (State and/or Federal Government employees, penal institution employees, and the like); and
5. Professional Organizational Personnel (executive secretaries and/or chairmen in MEA, NEA, and the like).

This categorization, as can readily be seen, is built on the premise that location is the primary vehicle along which the set of all educators should be divided.

Lieberman (1960) suggested that the major criterion by which to divide the set of all educators was not location, but rather involvement. He suggested that as education, and particularly elementary education, was a woman's profession, problems within the profession could, in a final analysis, be related to the level of involvement of the participant. The part-time involvement, although obvious in the itineracy rate in the profession, was even more serious in that, rather than only physical involvement, a psychological part-time involvement was also all too often present.

Anderson (1962), differing from both NCTE and Lieberman, saw the most appropriate criterion as being function. The role played in the profession was clearly more important than either location or level of involvement. In

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light of recent trends such as differential staffing, Anderson's proposal appears a sound one.

It is interesting to note that while each of these sources offers, for the most part, a single dimension on which to analyze educational personnel, each is aware of the need for more than a monolithic criterion. Although they may not agree on the ordering of these dimensions, they are in agreement that teachers constitute a highly diverse occupational group. Lieberman (1960 speaks out the most elequently:

> The tendency to regard all teachers as members of the same profession has resulted in more than a semantic confusion. It has lowered the quality of education and all but nullified the development of a strong teaching profession (p. 76).

Assuming that the three criteria identified by these authors are each important dimensions of the profession, then a further problem is posed. While each criterion is inclusive, it certainly is not mutually exclusive. If, as was suggested, the curriculum can be evaluated via a study of the career orientation of the client, than to that proposal must be added the capability of meaningful classification of participants.

It is at this juncture that the career typology developed must be reflective of the unique characteristics of the program for which it is designed. In the evaluation of a graduate program in elementary school curriculum and instruction, for example, one could, by simply studying an employment chart (such as those published by NEA or Saturday Review, 1970) deduce that the majority of the participants find subsequent employment at the elementary school level rather than in a college, governmental agency, or secondary school. In terms of the evaluation of this specific program, it seems highly inappropriate to make distinctions within categories not frequently utilized by significant numbers of persons in the program. Such

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categories, in fact, can best be studied in a less discriminant manner in order not to end up with the initial dilemma of one person/one category. In terms, however, of a program's major thrust, such as the preparation of elementary school personnel in a graduate program in elementary school curriculum and instruction, finer discriminations among personnel might be considered not only defensible but, in actual fact, desirable.

Having studied the unique characteristics of the program itself, one can successfully develop a career typology reflecting the specific program evaluated. In tabular form a career typology for elementary education is presented in Table 1:01.

The major value of this proposed typology is that it avoids the pitfall of a single dimension criterion. The typology divides the set of all educators along locational, functional, and involvement dimensions. In short, it avoids viewing the profession as the historically stifling one of a single "unitary entity" (Anderson, 1960).

A career typology of the sort proposed provides a systematic, yet logical, context by which to view the graduates of a graduate program in elementary education. Relating the earlier discussion of internal consistency together with this proposed typology, it is hypothesized that participants identified as belonging to a particular career type will not only reflect this similarity in their entrance characteristics, but further in the characteristics of their programs. The value of such a procedure, being largely descriptive in nature, is that, if successful, it will provide data necessary for making subsequent decisions regarding the current program and its future needs.

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TABLE 1:01

A Career Typology for Personnel in
Elementary Education (Elaborated Form)

1.0 Elementary Education School Personnel: Persons who identify with elementary education school personnel and who currently indicate a 50-100% time involvement at this level.

- 1.1 Instructional Personnel: School personnel who indicate that 75-100% of their time is spent in the function of teaching. (Prototype -- Elementary School Teacher.)
- 1.2 Instructional Support Personnel: School personnel who indicate that 75-100% of their time is spent in some function other than teaching. (Prototype -- Elementary School Principal.)

2.0 Elementary Education School Support Personnel: Persons who identify with some group other than elementary education school personnel and who currently indicate a 50-100% time involvement at these levels.

- 2.1 College Personnel: Persons who indicate an identity with college personnel and who currently hold a 50-100% time appointment at this level. (Prototype -- Instructor in Elementary Education.)
- 2.2 Auxilliary Personnel: Persons who indicate an identity with either secondary, governmental, or professional organizational personnel and who currently hold a 50-100% time appointment at these levels. (Prototype -- School District Audio-Visual Consultant.)
- 2.3 Reserve Personnel: Persons who indicate an identity with other occupations and who currently indicate a 50-100% time involvement at these levels. (Prototype -- Housewife.)

Procedures

To test the viability of these approach, graduates of the Master of Arts degree program, having a major in elementary school curriculum and instruction from the University of Minnesota during the period December, 1965, through December, 1970, were chosen for study (N = 191).

Of the original sample, data needed to perform the required analyses were determinable on 171, or 89.6 percent of the graduates. In order to determine whether or not there were differences between those persons dropped and the study sample, statistical tests were administered. From the results of this analysis, it was concluded that there were no meaningful differences between

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the study sample (N = 171) and the sample dropped (N = 20) on five available predictor measures.

Table 1:02 gives a frequency distribution of the study sample by criterion groups. Table 1:02 further indicates that 51 persons (approximately 30% of the study group) were randomly chosen to form the cross-validation group for the study.

Those variables selected for study were chosen because (1) they were current entrance criteria in the master's program, and (2) they were previously identified as significant in the writings and research of educators currently involved in program evaluation (Keller and Mitzel, 1954; Alciatore and Eckert, 1968; Stake, 1967; Taber, 1969; Duffy, 1967). Information was gathered in relation to each of the variables specified above via (1) a questionaire, and (2) an examination of the academic record of the graduate. The adequacy of the instrument was determined through a series of pilot studies and post hoc analyses. (Specific items studied included clarity (N = 50), and concurrent validity (N = 38).

TABLE 1:02
Frequency Distribution of Study Sample by Criterion Groups

| Criterion Groups | Total N | Development Group | Cross Validation Group |
|---|---|---|---|
| 1.0 Elementary Education School Personnel | 112 | 80 | 32 |
| 1.1 Instructional Personnel | 59 | 40 | 19 |
| 1.2 Instructional Support Personnel | 53 | 40 | 13 |
| 2.0 Elementary Education School Support Personnel | 59 | 40 | 19 |
| 2.1 College Personnel | 23 | 15 | 8 |
| 2.2 Auxiliary Personnel | 20 | 15 | 5 |
| 2.3 Reserve Personnel | 16 | 10 | 6 |

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Statistical Procedures

In order to determine significant variables per criterion group, the chi square and analysis of variance techniques were used to select those discrete and continuous variables worthy of further study. This process identified only significant variables and not whether two or more such variables were highly related. These variables were then further studied to analyze the nature, intensity, and direction of their inter-relatedness. Multiple discriminant analysis was selected as an appropriate statistical technique to test the hypotheses. Through the use of multiple discriminant analysis, it was possible to define a linear combination of variates which maximized the difference within groups. Through the examination of the discriminant coefficients which determine the linear combinations of variates, it was possible to gain insight into, and to observe the predictability of, the basic phenomena which characterized the varied career orientation types studied.

Results

The findings of the present study rejected the hypothesis that there was no difference among the student and program characteristics of graduates identified as having career orientations as elementary education school personnel and elementary education school support personnel.

The analysis of the data yielded a significant function along which persons in these two criterion groups could be classified. This discriminant function consisted of two major dimensions: The first was considered an academic aptitude dimension; the second was considered an interest dimension. Interests were here defined as student and program variables centered around an orientation to either a current or new position within the profession. This discriminant function accounted for 63.6 percent of the total variance among these groups.

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The findings of the study further rejected the hypothesis that there was no difference among the student and program characteristics of graduates classified as school instructional personnel and school instructional support personnel.

An analysis of the data yielded a significant function along which persons in these two criterion groups could be classified. This discriminant function consisted of a single dimension. This dimension focused on clientele interest as it relates to and is reflected in graduate program variables. The patterning of these interests varied between the two criterion groups while the program content was interpreted uniquely as having reflected the position orientation of the criterion group.

The assignment and prediction of group membership to one of the two criterion groups based on the respective discriminant function showed a higher percentage of correct classification than would have been obtained by chance. Table 1:03 shows that fewer errors were made in the classification of persons within the category school personnel (between instructional personnel and instructional support personnel) than were made between the major categories of school personnel and school support personnel.

Regardless of which comparisons are made between and among the groups identified in the career typology of elementary education, significant combinations of student and program variables are identified that compositely speak to unique dimensions of the groups compared. It is concluded, therefore, that this approach is a viable one in terms of the data generated and the distinctions possible.

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TABLE 1:03

Prediction of Group Membership Into One of Two Criterion Groups
(School Personnel vs. School Support Personnel)
Based on Student and Program Variables

| Set A (N = 51) | Predicted: School Personnel | Predicted: School Support Personnel | Actual Class. | Number Mis-Class. | Percent Of Correct Class. |
|---|---|---|---|---|---|
| School Personnel | 29 | 3 | 32 | 3 | 90.7 |
| School Support Personnel | 13 | 6 | 19 | 13 | 31.7 |
| TOTAL | 42 | 9 | 51 | 16 | 68.6 |

TABLE 1:04

Prediction of Group Membership Into One of Two Criterion Groups
(Instructional Personnel vs. Instructional Support Personnel)
Based on Student and Program Variables

| Set B (N - 32) | Predicted: Instruc. Personnel | Predicted: Instruc. Support Personnel | Actual Class. | Number Mis-Class. | Percent Of Correct Class. |
|---|---|---|---|---|---|
| Instructional Personnel | 11 | 8 | 19 | 8 | 58.4 |
| Instructional Support Personnel | 0 | 13 | 13 | 0 | 100.0 |

Discussion

The above conclusion relative to the viability of this approach to program evaluation in teacher education ignores to a large part the rich data generated by the approach along which sub-programs (reflecting career-like participants) can be understood and studied. This data, although extremely interesting and important to the graduate faculty of the institution studied, will not be discussed here, as it already has been

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made accessible in another published document (Harste, 1971). BEST COPY AVAILABLE

Far more interesting in terms of its generic importance to the profession is the credence that is given to the old and oft-spoken philosophy that good educational programs (whether at the elementary school or graduate school level) must, in the final analysis, adapt to the unique individuals which they inevitably serve. Higher education has met the challenge of individual differences by espousing the philosophy that a single degree program is in reality a set of flexible and individually tailored programs. This assumption further holds that a single program offering (i.e., the Master of Arts degree), can and does adapt to special goals of the myriad individuals that matriculate into the program, whatever their reason for so doing. Although this philosophy sounds very acceptable socially, this study lends little support to the proposition that such flexibility does in fact exist. This study of Minnesota's graduate program in elementary education indicated that it was oriented to serve a single group of educators; namely school personnel, and as such tended to be less receptive to the other groups of educators also utilizing the program to further their career development. The programs of these other groups of educators did not reflect the individual entrance characteristics of the groups identified, i.e., program variables were in the final analysis not salient variables distinguishing the groups of educators studied. While this finding may be considered a positive statement of support to the program in that this thrust mirrors the needs of the largest group of educators involved in elementary education, it is clearly a negative commentary on the preparation of college personnel, who, it was found, find the program the least congruent with their career goals.

Further, this finding poses a major problem: If higher education has

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not been able to adapt satisfactorily in the past to meeting the needs of the clientele it serves, what can it do to adapt to the individual goals of its clientele in a future characterized by magnitude, diversity, and change? A simplistic answer seems suggested: In this study, you will recall, groups of program participants were seen and studied in terms of their declared career orientations. As this perspective was proven viable, it appears that one type of action that could be taken by institutions of higher learning is simply that of offering a variety of programs. The taxonomy suggested here, and to which credence was offered, indicates that three programs are needed in the field of elementary education at the Master of Arts degree level if we are to serve the profession even minimally. Such a graduate offering would seem to not only face up to the fact that differences in participants exist, but further would greatly aid the development of a competent cadre of educators each having the best education possible in terms of their respective career orientations. Surely, no one would argue with the idea of competency at all levels in the education profession. Rather than pursue with the ever-increasingly outdated assumption that a single program offering provides enough versatility to graduate education, institutions ought to move rapidly toward looking at the sub-groups of educators it serves and develop programs uniquely reflective of those orientations. Excellence in nations (Gardner, 1961), as well as in teacher education, must rest on the full development of its human resources. Although Arlt (1969) has declared that a proliferation of programs in graduate education is an unfortunate situation, we can rest assured that such a proliferation would be a continuation of the policy that a single program can be responsive to the needs of an ever-heterogeneous population. And, who knows, such a movement may even elevate educational program evaluation to the status of a scientific study rather than just a member discipline of "the Black Arts."

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